

## REMARKS

This paper is responsive to the Office Action mailed June 20, 2007. Claims 1-22 and 24-30 are pending in the application. The Office Action rejected Claims 1-22 and 24-30 under 35 U.S.C. § 103(a) as being unpatentable over Hambrecht et al. (U.S. Patent No. 6,629,082) in view of Lutnick et al. (U.S. Patent No. 6,850,907). Claims 1, 4, 11, 18, and 24 have been amended. Applicant has carefully considered the cited art and the comments provided in the Office Action. As will be discussed in greater detail below, the claim rejections are misplaced and should be withdrawn. Allowance of the application is requested.

### Background Discussion

For background purposes, applicant again notes discussion of the present application that was provided in the Appeal Brief filed October 25, 2005, much of which was repeated in a subsequent response dated July 27, 2006.

In short, a market program or market process in the present application is referred to in the specification as an “order umpire” or “oU” (see page 5, lines 20-26), while a trading program or trading process is referred to as an “order ELF” (electronic liquidity finder) or “oE” (see page 5, lines 15-19). An ELF may elect to join the “crowd” for an umpire. See Figure 28, step 706. A crowd of ELFs functions in a manner similar to a crowd of traders on a trading floor. Crowd members take priority behind orders in the umpire’s order book, but otherwise have the time/place immediacy advantage of being “on the floor” such as having an ability to bid on imbalances at a price and an ability to interact with one another. See e.g., page 5, line 30, to page 6, line 2. An order ELF may register with an umpire for a market. However, it should be understood that an order ELF registering with an umpire is a *different procedure* than an order ELF registering in the crowd for an umpire. See page 73, lines 19-21.

At pages 117-118, the present application provides exemplary use cases in which an order umpire with an order book also has a “crowd” of order ELFs registered therewith. See also

the sections titled “Service: Crowd auction during discovery” and “Service: Crowd auction during execution” on page 30, lines 4-27.

#### Interview Summary

Prior to discussing the Office Action and the patentability of the claims, the undersigned counsel wishes to thank Examiner Graham for the time and consideration he extended in a telephone interview conducted October 22, 2007. In summary, the interview focused on proposed amendments to the claims and the patentability of the claims over the cited art (Hambrecht and Lutnick). At the conclusion of the interview, applicant agreed to formally submit the present amendment.

#### Claims 1-22 and 24-30 Are Patentable Over The Prior Art

The Office Action rejected Claims 1-22 and 24-30 under Section 103(a) as being unpatentable over Hambrecht in view of Lutnick. However, the Hambrecht reference does not provide disclosure that teaches or suggests all of the elements claimed in Claims 1-22 and 24-30 and the disclosure in Lutnick fails to overcome the deficiency of disclosure in Hambrecht.

To establish a *prima facie* rejection of a claim under Section 103, it is necessary that a combination of references teach each and every element of the claim in a manner that the elements as arranged in the claim would be obvious to a person of ordinary skill in the art. It is necessary to first determine the scope and content of the prior art. It is then necessary to ascertain the differences between the claimed invention and the prior art. *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (2007), citing factors set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966).

When properly understood, it is evident that the scope and content of Hambrecht and Lutnick fail to teach all of the elements claimed in the present application. As for Hambrecht, the Office Action cited Col. 11, line 35, to Col. 13, line 14, while for Lutnick, the Office Action cited Col. 29, lines 23-51; Col. 22, lines 58-63; and Col. 34, lines 47-67. Applicant has carefully

studied these passages, and indeed the entire disclosures of Hambrecht and Lutnick, and does not find disclosure that supports a *prima facie* case of obviousness of the present claims.

Hambrecht is directed to an auction system that is used for pricing and allocating equity securities. Bids are accepted and offered to be accepted only from qualified potential purchasers. A clearing price for the offered shares is determined based on the received bids. Prospective investors who bid a price above the clearing price are allocated all of the shares for which they bid. Prospective investors who bid a price equal to the clearing price are allocated a pro-rata allocation of the shares for which they bid. No shares are allocated to prospective investors who bid a price below the clearing price.

Lutnick is directed to a data processing system for implementing transaction management of auction-based trading for specialized items such as fixed income instruments. While Lutnick uses the term "price improvement," it is important to note that the logic and process used in Lutnick to implement said "price improvement" is not equivalent to the price improvement that is taught and claimed in the present application. According to Lutnick, price improvement occurs when there is a *surplus* in a trade: "The Aggressor who initiates the Price Improvement trade is granted protection by allowing contra-trader(s) to buy or sell more at the higher or lower prices shown as the case may be. This is accomplished through system logic that measures the surplus and allocates any available surplus among the trader and the contra-traders." (See Col. 26, lines 3-8 of Lutnick).

Even if the combination of Hambrecht and Lutnick is possible (which applicant respectfully denies), the combination of the references does not render obvious the subject matter claimed in the present application.

#### Claims 1-3 Are Patentable Over Hambrecht and Lutnick

Claim 1 recites a method of facilitating trading among a plurality of trading processes participating at a market provided by a market process. The method comprises:

- automatically, via a computer, providing a price inquiry for an item to the market process, the market process having an order file and also having, for the item, a subset of the plurality of trading processes registered therewith as a crowd that, as a result of registration, is eligible to receive opportunities from the market process to provide a price that improves upon a price that is listed in the order file for the item, wherein an improved price is a price that is higher than the highest buy price in the order file for buying the item or lower than the lowest sell price in the order file for selling the item, wherein the improved price is not listed in the order file of the market process, and wherein trading processes participating at the market that are not registered in the crowd for the item are not eligible to receive said price improvement opportunities from the market process, and
- automatically, via the computer, requesting that the market process notify its crowd of a price improvement opportunity for the item, wherein a trading process providing an improved price commits to trade for the item at the improved price.

Both Hambrecht and Lutnick fail to teach or suggest a market process also having a crowd of trading processes registered therewith, as recited in Claim 1. Hambrecht and Lutnick also fail to teach or suggest requesting that the market process notify its crowd of trading processes of a price improvement opportunity, as recited in Claim 1.

Moreover, neither Hambrecht nor Lutnick discloses a subset of a plurality of trading processes registered in a crowd, as claimed, which is distinct from registering for a market, as previously discussed herein. Since the arrangements taught by Hambrecht and Lutnick do not include a crowd of registered trading processes for purposes of receiving and responding to price improvement opportunities, as claimed, Claim 1 is patentable over Hambrecht and Lutnick and should be allowed.

Claims 2-3 depend from Claim 1 and thus include the allowable subject matter of Claim 1. Claims 2-3 also recite additional patentable elements including:

- further comprising trading at the improved price provided by the trading process in the crowd; and
- wherein the automatically providing and requesting are performed by a trading process.

For their dependence on Claim 1 and for the additional subject matter they recite, Claims 2-3 are patentable over the cited art and should be allowed.

Claims 4-10 Are Patentable Over Hambrecht and Lutnick

Claim 4 recites a method of providing a crowd price for an item, wherein the crowd price improves upon a book price for the item at a market process. The method comprises:

- automatically, via a computer, receiving notice at a trading process of an opportunity to improve upon a book price for the item, wherein the trading process is registered with the market process as being in a crowd for the item, the crowd comprising a subset of a plurality of trading processes that, as a result of registration, is eligible to receive opportunities from the market process to provide a price outside of the book that improves upon a book price for the item, wherein an improved price is a price that is higher than the highest buy price in the book for buying the item or lower than the lowest sell price in the book for selling the item and is not listed in the order book of the market process,
- automatically, via the computer or another computer, determining whether to provide a price outside of the book that improves upon the book price for the item by providing a crowd price,
- automatically, via the computer or another computer, providing the crowd price that improves the book price when the determination is positive, and
- automatically, via the computer or another computer, completing a trade for the item at the crowd price.

For a description of the element of "receiving notice at a trading process of an opportunity to improve upon a book price for the item, wherein the trading process is registered with the market process as being in a crowd for the item . . . ," the Examiner is invited to review page 93, lines 3-7, along with Figure 79; page 117, line 19; and page 118, line 26, of the present application. The element of "determining whether to provide a price outside of the book that improves upon the book price for the item by providing a crowd price" is illustrated, for example, at page 117, lines 20-21, and page 118, lines 27-28. The element of "providing the crowd price that improves the book price when the determination is positive" and "completing a trade for the item at the crowd price" is illustrated, for example, at page 117, line 22, and page 118, line 29.

Both Hambrecht and Lutnick fail to teach or suggest the elements of Claim 4, and thus do not render obvious the subject matter claimed in Claim 4. Neither the claimed crowd of trading processes nor the claimed price improvement is shown in Hambrecht or Lutnick. Claim 4 should thus be allowed.

Claims 5-10 depend from Claim 4 and thus incorporate the allowable subject matter of Claim 4. Claims 5-10 also recite elements including:

- wherein the determining is performed in accordance with an order processing methodology;
- wherein the order processing methodology is represented in a decision table;
- wherein the determining includes requesting an instruction from a user;
- further comprising automatically registering as part of the crowd to receive the price improvement opportunity notice;
- wherein the automatically registering occurs with a market process; and
- wherein the automatically receiving notice, determining and providing a crowd price are performed by a trading process.

For their dependence on Claim 4 and for the additional subject matter they recite, Claims 5-10 are patentable over the cited art and should be allowed.

Claims 11-17 Are Patentable Over Hambrecht and Lutnick

Claim 11 recites a method of providing a crowd price for an item, wherein the crowd price improves upon a proposed pairing price for the item. The method comprises:

- automatically, via a computer, receiving notice at a trading process of a proposed pairing price for the item, wherein the trading process is registered with a market process as being in a crowd for the item, the crowd comprising a subset of a plurality of trading processes that, as a result of registration, is eligible to receive a proposed pairing price for the item and in response thereto provide a price that improves upon a proposed pairing price for the item, wherein an improved price is a price that is higher than the proposed pairing price for buying the item or lower than the proposed pairing price for selling the item, and wherein trading processes in said plurality of trading processes that are not registered as being in the crowd for the item are not eligible to receive the notice of proposed pairing price nor provide an improved price to the market process in response thereto,
- automatically, via the computer or another computer, determining whether to improve upon the proposed pairing price for the item by providing a crowd price, and
- automatically, via the computer or another computer, providing an improved price as crowd price that improves upon the proposed pairing price when the determination is positive.

As with Claim 4, embodiments illustrating the foregoing elements of Claim 11 are described in the specification, e.g., at page 93, lines 3-7 and Figure 79; page 117, lines 19-22; and page 118, lines 26-29.

Both Hambrecht and Lutnick fail to teach or suggest all the elements of Claim 11, and thus do not render Claim 11 obvious. Neither the claimed crowd of trading processes nor the claimed price improvement is shown in Hambrecht or Lutnick. Claim 11 should thus be allowed.

Claims 12-17 depend from Claim 11 and thus incorporate the allowable subject matter of Claim 11. Claims 12-17 further recite elements including:

- wherein the determining is performed in accordance with an order processing methodology;
- wherein the order processing methodology is represented in a decision table;
- wherein the determining includes requesting an instruction from a user;
- further comprising automatically registering as part of the crowd to receive the proposed pairing price notice;
- wherein the automatically registering occurs with a market process; and
- wherein the automatically receiving notice, determining and providing a crowd price are performed by a trading process.

For their dependence on Claim 11 and for the additional subject matter they recite, Claims 12-17 are patentable over the cited art and should be allowed.

#### Claims 18-22 Are Patentable Over Hambrecht

Claim 18 recites a method of providing price discovery for an item. The method comprises:

- automatically, via a computer, notifying a crowd of trading processes registered with a market process of an opportunity to improve upon a book price for the item, wherein as a result of registration the trading processes in the crowd are eligible to receive opportunities from the market process to provide outside of the book a price that improves upon a book price for the item,



- automatically, via the computer or another computer, receiving a crowd price from the crowd for the item, wherein a trading process that provides an improved price as the crowd price is obligated to trade for the item at the crowd price, and
- automatically, via the computer or another computer, providing the crowd price as a result of the price discovery when the crowd price is better than the book price, wherein the crowd price is better than the book price when the crowd price is higher than the highest buy price in the book for buying the item or lower than the lowest sell price in the book for selling the item.

Claim 18 is written from the viewpoint of a market process that interacts with a plurality of trading processes and is directed to providing price discovery.

The recitation of "automatically, via a computer, notifying a crowd of trading processes registered with a market process of an opportunity to improve upon a book price, wherein as a result of registration the trading processes in the crowd are eligible to receive opportunities from the market process to provide outside of the book a price that improves upon a book price for the item" is disclosed, for example, at page 93, lines 3-7 and Figure 79, and page 118, lines 21-22, with the computer being illustrated, for example, by the system 5 shown in Figure 1. The recitation of "automatically, via the computer or another computer, receiving a crowd price from the crowd for the item, wherein a trading process that provides an improved price as the crowd price is obligated to trade for the item at the crowd price" is disclosed, for example, at page 118, lines 29-30, while page 118, lines 30-31 illustrate an example of "providing the crowd price as a result of the price discovery when the crowd price is better than the book price," as claimed in Claim 18. The crowd price is better than the book price when the crowd price is higher than the highest buy price in the book for buying the item or lower than the lowest sell price in the book for selling the item.

Applicant has carefully reviewed the entire disclosure of Hambrecht and Lutnick and does not find disclosure that teaches (separately or in combination) all of the elements of

Claim 18. Both Hambrecht and Lutnick fail to teach or suggest a crowd of trading processes registered with a market process, as recited in Claim 18, wherein as a result of registration the trading processes in the crowd are eligible to receive opportunities from the market process to provide, outside of the book, a price that improves upon a book price for the item. Hambrecht and Lutnick also fail to teach or suggest notifying a crowd of trading processes of an opportunity to improve upon a book price, as claimed. Further, Hambrecht and Lutnick fail to teach or suggest receiving a crowd price from the crowd, wherein a trading process that provides an improved price as the crowd price is obligated to trade for the item at the crowd price, and providing the crowd price as a result of the price discovery when the crowd price is better than the book price, as claimed. Since the disclosures of Hambrecht and Lutnick do not teach all the elements recited in Claim 18, a *prima facie* case of obviousness has not been established. Claim 18 should thus be allowed.

Claims 19-22 depend from Claim 18 and thus incorporate the allowable subject matter of Claim 18. Claims 19-22 further recite elements including:

- wherein the automatically providing occurs in response to a price inquiry within a published delay time;
- wherein when the crowd price is provided as a response to a price inquiry, a pairing for the item must occur;
- further comprising receiving a price inquiry specifying that the response to the price inquiry should occur after automatically notifying the crowd of the price improvement opportunity; and
- wherein the automatically notifying, receiving and providing are performed by a market process.

For their dependence on Claim 18 and for the additional subject matter they recite, Claims 19-22 are patentable over the cited art and should be allowed.

Claims 24-30 Are Patentable Over Hambrecht

Lastly, Claim 24 recites a method of facilitating trading of an item among a plurality of trading processes. The method comprises:

- automatically, via a computer, notifying a crowd of trading processes registered with a market process of a proposed pairing price for the item, wherein the crowd is comprised of a subset of the plurality of trading process that, as a result of registration, is eligible to receive a proposed pairing price for the item and in response provide a price that improves upon the proposed pairing price for the item,
- automatically, via the computer or another computer, receiving a crowd price from the crowd for the item, and
- automatically, via the computer or another computer, pairing with the crowd price to complete a trade when the crowd price is better than the proposed pairing price, wherein the crowd price is better than the proposed pairing price when the crowd price is higher than the proposed pairing price for buying the item or lower than the proposed pairing price for selling the item.

Like Claim 18, Claim 24 is from the viewpoint of a market process that interacts with a plurality of trading processes. However, Claim 24 is directed to facilitating trading of an item.

The recitation of "automatically, via a computer, notifying a crowd of trading processes registered with a market process of a proposed pairing price for the item, wherein the crowd is comprised of a subset of the plurality of trading process that, as a result of registration, is eligible to receive a proposed pairing price for the item and in response provide a price that improves upon the proposed pairing price for the item" is disclosed, for example, at page 93, lines 3-7 and Figure 79, and page 117, line 18. The recitation of "automatically, via the computer or another computer, receiving a crowd price from the crowd for the item" is disclosed, for example, at page 117, line 22, while page 117, lines 23-24 illustrate an example of "pairing with the crowd

price to complete a trade when the crowd price is better than the proposed pairing price," as claimed in Claim 24. The crowd price is better than the proposed pairing price when the crowd price is higher than the proposed pairing price for buying the item or lower than the proposed pairing price for selling the item.

As with Claim 18 and the other claims in the present application, the Office Action merely copied the claim language and generally alleges that the claim elements are found either at Col. 11, line 35, to Col. 13, line 14 of Hambrecht or at Col. 29, lines 23-51; Col. 22, lines 58-63; and Col. 34, lines 47-67 of Lutnick. Careful review of these sections of the cited art confirms that neither Hambrecht nor Lutnick provides sufficient disclosure to support an obviousness determination under Section 103. Specifically, neither Hambrecht nor Lutnick teaches a crowd of trading processes registered with a market process, as recited in Claim 24, wherein the crowd is comprised of a subset of the plurality of trading processes that, as a result of registration, is eligible to receive a proposed pairing price for the item and in response provide a price that improves upon the proposed pairing price for the item. Hambrecht and Lutnick also fail to teach or suggest notifying a crowd of trading processes of a proposed pairing price, as claimed. Further, Hambrecht and Lutnick both fail to teach or suggest receiving a crowd price from the crowd, and pairing with the crowd price to complete a trade when the crowd price is better than the proposed pairing price, as claimed. Since Hambrecht and Lutnick (separately or in combination) fail to teach all the elements recited in Claim 24, the references do not support a *prima facie* case of obviousness. Claim 24 should thus be allowed.

Claims 25-30 depend from Claim 24 and thus include the allowable subject matter of Claim 24. Claims 25-30 further recite the following elements:

- wherein the automatically pairing occurs within a published delay time;
- wherein the published delay time is less than one second;
- wherein the published delay time is greater than one second;

- further comprising determining that a next pairing will be at the proposed pairing price different than a previous pairing price;
- wherein the proposed pairing price is the best price from a file of stored orders; and
- wherein the automatically notifying, receiving and pairing are performed by a market process.

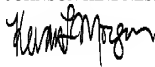
For their dependence on Claim 24 and for the additional subject matter they recite, Claims 25-30 are patentable over the cited art and should be allowed.

### CONCLUSION

Applicant requests reconsideration and allowance of the present application. Absent a *prima facie* case of obviousness, the rejection of Claims 1-22 and 24-30 under Section 103 should be withdrawn. Should any issues remain needing resolution prior to allowance, the Examiner is invited to contact the undersigned counsel by telephone.

Respectfully submitted,

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